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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,148	11/15/1999	YIWEI THOMAS HOU	35400/PYI/F1	2594

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EXAMINER

EMDADI, KAMRAN

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/440,148

Applicant(s)

HOU ET AL.

Examiner

Kamran Emdadi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,13,25 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-11,14-24,26 and 28-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Objections*

1. Claim 12 is objected to because of the following informalities: The claim has been allowed for reasons stated in the paper no. 3 provided: in paragraph 5 “the metrics server is changed to “a metrics server.” Appropriate correction is required.

### *Response to Arguments*

2. Regarding the applicant’s concern for the mutual understanding of the term intranet. The examiner acknowledges the applicant’s concern for the term intranet. The term “intranet” is commonly used in the art of networking systems, and the examiner has cited some of the applicants detailed references in the specification for the use of the term intranet, some examples are:

“The intranet includes at least one server. The method includes the steps of non-intrusively measuring network traffic between at least one server in the intranet and at least one client outside the intranet or over the Internet” (Pages 3 and 4).

“A particular of type of LAN or WAN is an intranet” (Page 4)

“FIG. 1 illustrates an abstract model of a network including a measurement infrastructure of the present invention. The network 19 represents an intranet” (Page 5)

Examiner notes that figure 1 is three servers, each server capable of communicating to each of the other two servers and to the attached clients. The (Figure 1) of de la Salle shows a separate network grouping or LAN that could constitute for a separate LAN 14a, connected to a server 32. The one server is shown and the following are definitions of an intranet are used in the art of networking systems shown by the following citations:

“ Any network which provides similar services within an organization to those provided by the Internet outside it but which is not necessarily connected to the Internet.”  
(<http://foldoc.doc.ic.ac.uk/foldoc/index.html>)

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“By an intranet, we mean a local network that uses the tcp/ip protocol and Internet applications.” (Nahkimovsky, A. SIGCSE Bulletin Conference Title: SIGCSE Bull. (USA), vol. 30, no. 3 p.297, Sep. 1998)

“ The current working definition of an Intranet is a limited, access network of linked computers that uses a common Internet-based protocol to exchange data and information.” (Fotsch, Edward) Healthcare Financial Management, Pp. 30-31, Sep. 1996)

Given these three definitions combined with the applicant's definitions of an Intranet, the examiner traverses the statement made in the amendment as to the definition of an “intranet” “As such, de la Salle does not describe or suggest an intranet, i.e., a network accessible only by users with authorization.” As being invalid as to the broadness of the term used by ones of ordinary skill in the art and further not being limited to a network with authorizations specifically required to access the intranet, and nowhere in the specification is the phrase intranet described in any context to be limited by the authorized users, the written description included in these amended independent claims includes this invalid limitation and the claims are rejected under 112 1<sup>st</sup> paragraph and the prior rejections will stand.

3. The examiner would like to make reference to the given definitions outlined in the specification for “intrusive” and “non-intrusive”.

“Intrusive measurements or active probing requires the use of dummy or probing packets to perform measurements of the data traffic for the specific network. Probing packets are injected into the specific network in the same manner as other data packets being regularly introduced into the network by the numerous computing devices. The probing packets are then monitored and sometimes traced as the packets flow through the interconnections within the network. By monitoring and tracing the probing packets, measurement of network traffic is fairly accurate and highly controllable by the device injecting the probing packet into the network. However, intrusive measurement techniques, by injecting and monitoring probing packets into a network, often introduces additional network overhead, i.e. burdens or reduces the capacity of data transferring throughout the specific network. The second category of techniques measuring network traffic is referred to non-intrusive measurement techniques. Non-intrusive measurement techniques include passively monitoring the data packets being transferred to and from the computing devices within a particular network. No additional data packets need to be created or introduced into the network and thus, no or very little network overhead

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is introduced. However, non-intrusive measurements sometimes do not provide an accurate reading for the particular network.”

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-11, 14-24, 26, and 28-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
- The term “intranet” is not enabled in the specification to include the limitation “a network accessible only by authorized users” and further given the definitions of an intranet above, from the specification of the applicant and from the various sources cited, the authorization process cannot be made to reason as an inherent function of an intranet, the claims are thus rejected under the written description requirement.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-8, 14-19, 28-32, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Salle (US Patent No. 6144961) in view of (Dobbins US Patent No. 5485455).
- Regarding claims: 1, 14-19, 28, 29 and 34-36 are, de la Salle teaches: a network with a server 32 (Figure 1) and a probing method used to probe data packets for a set amount of time (Col 4, lines 23-39), with an ongoing communication taking place and the time allotted to measure traffic as a part of an larger ongoing exchange of data (Col 4, lines 40-49), in a non-intrusive manner (Col 4, lines 61-64) a network interface device and a connection to a destination device originating from a source device where the devices mentioned are a client computer and a server respectively (Col 9, lines 40-55), a separate intranet for the server communicating to clients external to that intranet (Figure 1), but fails to teach of any plurality of metrics being measured by the server and a processor coupled to the network interface. Dobbins teaches: a network with a processor coupled to a network interface (Figure 5) and metrics measured and calculated throughout the system to establish traffic routing assistance providing a better efficiency (Col 4, lines 20-40). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined a processor and metrics calculations with a server and client type network using non-intrusive techniques to further, increase efficiency.
  - Regarding claim 2, de la Salle teaches: a first packet being transmitted between two nodes as a data segment is detected between the two nodes and an end to the data stream is detected by a lack of packets or after a last packet (Col 18, lines 14-28).

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- Regarding claim 3, de la Salle teaches: an IBM compatible computer and or various subnetworks as types of networks valid for the configuration described herein; however, de la Salle fails to teach IP addresses assigned to the server and client as references for the source and destination addresses used to identify the respective nodes on the network, examiner takes official notice that an IP address is well known as a means to identify a node on a network especially within IBM compatible computers and related subnetworks.
- Regarding claims 4 and 5, de la Salle teaches: a server with active communication to users outside the server's intranet (Figure 1).
- Regarding claim 6, de la Salle teaches: a network interface device and a connection to a destination device originating from a source device where the devices mentioned are a client computer and a server respectively (Col 9, lines 40-55), but fails to teach a header portion of the packet as the portion filtered, Dobbins teaches: a network interface device with a header as the means for lookup with the MAC address as a terminal means for header translation (Col 15, lines 33-37). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the header as the only means of data captured as a provision for necessary information as not to exceed beyond the required data in order to keep efficiency at a maximum.
- Regarding claims 7, 8, and 30, de la Salle teaches: server 32 acting as a router for calculating hop counts, examiner takes official notice that the most basic needs of a

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router are memory for routing table storage and data forwarding and a network interface.

- Regarding claims 31 and 32, de la Salle teaches: a probe computer that probes the network (Figure 2) but fails to teach of intrusive or probing packets being added to the regular flow of data in a respective network. Dobbins teaches: a probe packet used on a connection establishment determination network arrangement. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the use of probe packets on a network as an effective means to track packets on a network.
- 8. Regarding claims 9-11 and 37-39, are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Salle (US Patent No. 6144961) in view of (Dobbins US Patent No. 5485455) in further view of Hershey (US Patent No. 5375070).
- Regarding claims 9-11, de la Salle teaches: all of the above embodiments except: a processor as a means for updating, accumulating of metrics, and source and destination IP address information including timestamp information. Dobbins teaches: a processor 77 used to connect source and destination IP addressed units, and program a switch as to the valid connections (Col 17, lines 50-65), and metrics measured and calculated throughout the system to establish traffic routing assistance providing a better efficiency (Col 4, lines 20-40), Hershey teaches: a network with a timestamp as a means for tracing data for a time dependent network (Col 1, lines 40-46) and a data processor 105 coupled to memory 100 and a table for storage of source and destination information. Therefore it would have been obvious to one of ordinary

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skill in the art at the time the invention was made to have combined the use of a processor to establish routing information stored in a table for source and destination routing with timestamp information for an added metric associated with the time sensitive intervals in order to have active time information associated with each individual packet for more precise packet analysis.

- Regarding claims: 37-39, de la Salle teaches: a network with a server 32 (Figure 1) and a probing method used to probe data packets for a set amount of time (Col 4, lines 23-39), with an ongoing communication taking place and the time allotted to measure traffic as a part of an larger ongoing exchange of data (Col 4, lines 40-49), in a non-intrusive manner (Col 4, lines 61-64) a network interface device and a connection to a destination device originating from a source device where the devices mentioned are a client computer and a server respectively (Col 9, lines 40-55), a separate intranet for the server communicating to clients external to that intranet (Figure 1), but fails to teach of any plurality of metrics being measured by the server and a processor coupled to the network interface or a record adding and deletion method dependent upon data metrics. Dobbins teaches: a network with a processor coupled to a network interface (Figure 5) and metrics measured and calculated throughout the system to establish traffic routing assistance providing a better efficiency (Col 4, lines 20-40). Hershey teaches: a network routing system with a routing table interfaced with network interfaces a memory 100 and processing unit 105 (Figure 1A) updated periodically depending on the source or destination packets received therein. Therefore it would have been obvious to one of ordinary skill in the

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art at the time the invention was made to have combined a processor and metrics calculations with a server and client type network using non-intrusive techniques with a dynamic record keeping unit to further, increase efficiency and maintain accurate records of neighboring devices.

9. Claims 20-24, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Salle (US Patent No. 6144961) in view of (Dobbins US Patent No. 5485455) and further in view of Bhaskaran (US Patent No. 5963540).
- Regarding claims 20-24 and 33 de la Salle teaches all a network with a server 32 (Figure 1) and a probing method used to probe data packets for a set amount of time (Col 4, lines 23-39), with an ongoing communication taking place and the time allotted to measure traffic as a part of an larger ongoing exchange of data (Col 4, lines 40-49), in a non-intrusive manner (Col 4, lines 61-64) a network interface device and a connection to a destination device originating from a source device where the devices mentioned are a client computer and a server respectively (Col 9, lines 40-55), a separate intranet for the server communicating to clients external to that intranet (Figure 1), but fails to teach of a second network server used to communicate on a second network connection while communicating the above parameters and signaling between the two servers. Bhaskaran teaches: a conventional network with two servers (Figure 1) with networked links between the two servers on an IP network (Col 1, lines 15-24). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the conventional network configuration of two servers with the above embodiment in

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order to establish a conventional topological configuration for providing added services to for flexible enhancement purposes.

- Regarding Claim 26, de la Salle teaches all of the above embodiments except a second server, while it was shown that it would have been obvious to combine a second server with a configuration taught by the applicant, it was not taught that the servers would periodically exchange metrics data, examiner takes official notice that it is well know in the art to a Microsoft Certified Systems Engineer or related network training that a second server will communicate with a primary server periodically to gather whatever predefined metrics are administered currently by the primary server.

#### *Allowable Subject Matter*

10. Claims: 12, 13, 25, and 27 are allowed for reasons specified in paper no. 3.

#### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- Nessel (US Patent No. 5968176) Multilayer firewall network system.
  - Jensen (US Patent No. 6067572) Path network routing system.
  - Hultgren (US Patent No. 6134589) Dynamic quality control network routing.
  - Vaid et al. (US Patent No. 6502131) Traffic management tool.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamran Emdadi whose telephone number is (703) 305-4899. The examiner can normally be reached between the hours of 8am and 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached at (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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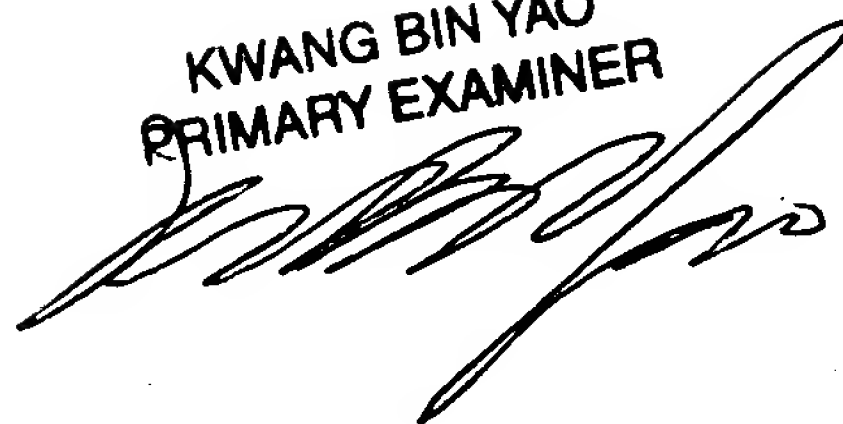
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Kamran Emdadi

04/19/2003

KWANG BIN YAO  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Kwang Bin Yao', is written over the printed name and title.